

Gettysburg Nature Alliance



One Habitat. One Heritage.

www.gettysburgnature.org

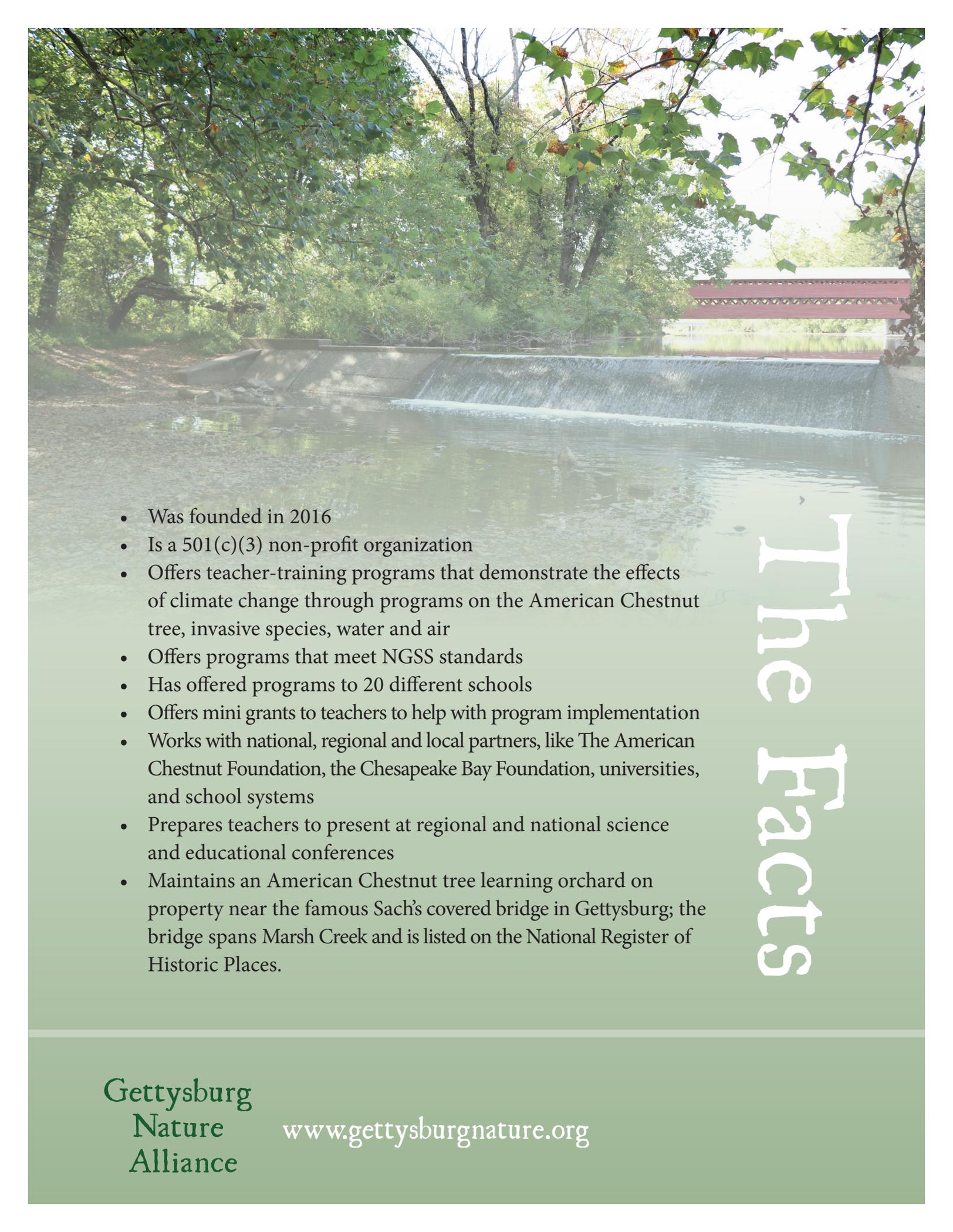
Woods. Water. Wisdom. YOU.

Gettysburg is one of our nation's most recognizable places. Famous for the three-day Battle of Gettysburg in July 1863 that helped change the course of the Civil War, Gettysburg also is home to an impactful and relevant natural environment.

This compelling combination of heritage and habitat allow you to experience and learn about YOUR environment (no matter where you may live!) in a setting like no other. Join us as we take action to achieve real-world impact on the education about and preservation of our collective natural and historic resources.



The Gettysburg Nature Alliance, a non-profit organization, is committed to actionable and achievable education goals relating to Gettysburg's habitat and heritage—and their relevance to our national story.

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- Was founded in 2016
 - Is a 501(c)(3) non-profit organization
 - Offers teacher-training programs that demonstrate the effects of climate change through programs on the American Chestnut tree, invasive species, water and air
 - Offers programs that meet NGSS standards
 - Has offered programs to 20 different schools
 - Offers mini grants to teachers to help with program implementation
 - Works with national, regional and local partners, like The American Chestnut Foundation, the Chesapeake Bay Foundation, universities, and school systems
 - Prepares teachers to present at regional and national science and educational conferences
 - Maintains an American Chestnut tree learning orchard on property near the famous Sach's covered bridge in Gettysburg; the bridge spans Marsh Creek and is listed on the National Register of Historic Places.

The Facts

Dr. Kerri Bloom, B.S.

Dr. Bloom served as executive director of the Central Intermediate Unit before becoming director of special education for the Lincoln Intermediate Unit. She has been a teacher, supervisor and consultant working with more than 250 school districts across Pennsylvania and an instructional consultant for the Instructional Support System of Pennsylvania. She has worked as a consultant for six New York school districts and has been a featured speaker at universities and state and national conferences as well as being an expert witness for due-process hearings. She received a Ph.D. in educational administration from Penn State University and a B.S. in special education from Clarion University.

Gary Hedges, M.Ed., B.S.

Mr. Hedges has 43 years of educational experience in Pre-K through grade 12 public-education initiatives, including secondary science instruction, curriculum & assessment design, standards development (Maryland & NGSS) and teacher professional learning at the local, state and national levels. He has developed and reviewed instructional resources for national vendors and shared strategies for effective science teaching at numerous regional and national conferences. Mr. Hedges managed the VIP k26 NSG Grant Project in association with the University of Maryland, which provided high-school and instructional and assessment strategies for Montgomery County Maryland Public School's secondary science teachers. He led the development and implementation of the Governor's Academy for Biology and the Biology High School Assessment while working for the Maryland State Department of Education, where he serves as program specialist for environmental education.

Dr. Thomasina Piercy

Earning her Ph.D. in curriculum and instruction from the University of Maryland, Dr. Piercy's research received the Reading Research Award from the State of Maryland International Reading Association. She was honored with the Bailor Award from McDaniel College for her distinguished career in education. While serving as a principal, she was a graduate-level adjunct professor and recipient of the Children's Hero Award by CASA. During her leadership in Carroll County, Maryland, as the K-12 supervisor of reading/literacy for 40 schools, Carroll County achieved the highest reading performance in Maryland. Dr. Piercy is the author of the national superintendent's organization, AASA, co-publication book, *Compelling Conversations: Connecting Leadership to Achievement*. She is the co-author of the Common Core book *Disciplinary Literacy: Redefining Deep Understanding and Leadership for the 21st Century*, and she has authored over a dozen chapters and articles. Publications include: *Preparing for Common Core Implementation: Aligning Literacy Expectations* (2011); *Text Complexity Structures Supporting Comprehension* (2011), *Increasing Students' Deeper Understanding of Complex Text with Disciplinary Literacy Instruction* (2011), and *Leading and Learning with Habits of the Mind* (2000). She provides professional development for districts around the country on disciplinary literacy, critical thinking and depth of knowledge for the Leadership and Learning Center (Denver, Colorado) and The Master Teacher (Kansas). She also is a trainer for Thinking Maps.

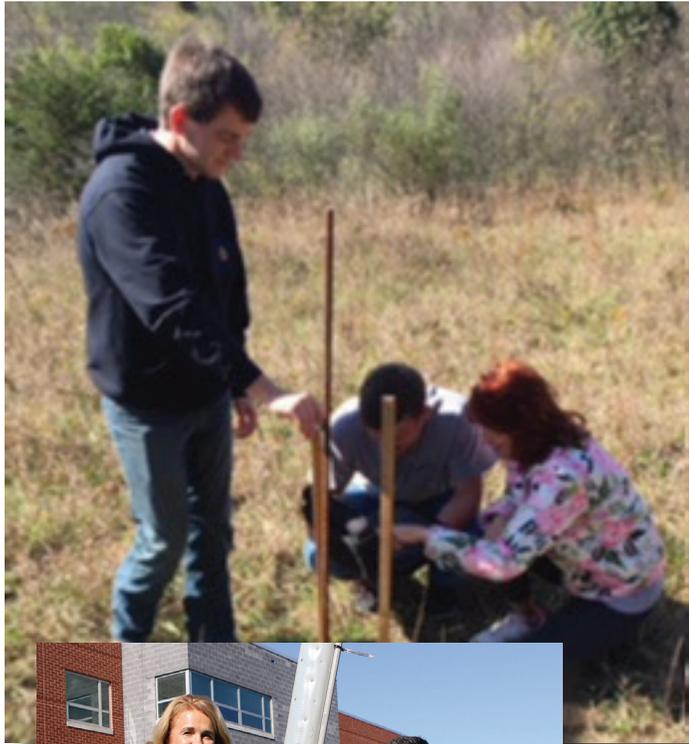
Dr. William Piercy

Before earning his Ph.D. at the University of Maryland and being a graduate-level adjunct professor, Dr. Piercy cultivated a passion for leadership development and school improvement working as a high-school principal for 16 years and as a supervisor for Carroll County Public Schools in Maryland. Today, he works with districts, schools, classroom teachers and support staff from across the country to facilitate their understanding of how 21st-century learners own their learning. He guides administrations and teachers to implement disciplinary literacy instructional tools, literacy strategies and emotional understanding. Dr. Piercy is the co-author of Common Core book *Disciplinary Literacy: Redefining Deep Understanding and Leadership for the 21st Century*. He is co-author of the chapter *Chaos in the Classroom: The New Science Applied to Instructional Practice in Critical Thinking and Reasoning*. He is the past president of Maryland's Learning Forward organization for professional development, and he was the national director of professional learning for The Master Teacher (Manhattan, Kansas). Piercy Consulting Group was formed to provide future direction, collaboration in diverse contents among school teams and districts, cooperative learning opportunities for adults and improved student performance for children. He has presented at national conferences including ASCD, AASA, IRA, NSDC and the International Conference on Thinking.

Brad Yohe, M.Ed., B.S.

After earning his bachelor's degree in chemistry from Lock Haven University, Mr. Yohe went on to further his graduate studies at Penn State University and McDaniel College, where he earned his master's degree in educational administration. He has deep classroom and leadership experiences as a chemistry teacher chairperson of the science departments in Carroll and Frederick counties in Maryland; he took on a high-school administration role in Carroll County and later became supervisor of science education (Carroll County), a system of more than 25,000 students in 21 schools with 130+ science teachers. There, he initiated classroom reforms such as the Physics First and The American Chestnut Curriculum initiatives, which changed the roles of both students and teachers in the classroom. The supporting curriculum used authentic storylines that engaged students in achieving higher scores on state assessments (Lederman, Bunce, Eisenkraft & Hewitt). The lessons were organized into Bybee's SE framework that included assessments reflected in McTighe & Williams's "Backward Design." During the evolution of the science standards, Mr. Yohe served on the review committee for the National Science Foundation funded Project 2061 initiative. He served on the Maryland state standards committee for the past 20 years and most recently served on the Maryland review committee for NGSS.

Teacher Training



Everything starts with TEACHERS.

The Gettysburg Nature Alliance's teacher-education goals include:

- Train teachers to teach science differently using educational research from the past 20 years. This research has been integrated into a set of new National Science standards: the Next Generation of Science Standards (NGSS).
- Create science lessons that increase student interest and achievement by using authentic topics like the American Chestnut tree story, salamanders and invasive species to explain the impact of climate change on our environment
- Integrate technology into lessons, when appropriate, including GPS/GIS, gel electrophoresis, Image J software and computer interface
- Integrate all of the above to help school systems increase their achievement on state assessments
- Demonstrate how these lessons integrate with climate-change issues across the globe

How can teachers participate?

Contact Brad Yohe at the Gettysburg Nature Alliance at brad.yohe@gmail.com for an easy application.

The Gettysburg Nature Alliance's teacher-training program defines and models teaching strategies in authentic frameworks that improve student engagement and achievement. Teachers will receive model lessons, teaching strategies and the opportunity to apply for mini grants to help with implementation.

American Chestnut Tree

The American chestnut tree serves as a foundation for the Nature Alliance's training program, which aims to ultimately demonstrate the effects of climate change. The chestnut tree covered the mountains and valleys of the eastern United States for millions of years, later becoming keystone of the economy right up and into the 20th century. When a blight struck with fury in the early part of the century, four billion chestnut trees were destroyed, leaving an environmental void that has been difficult to fill.

As the nation faces the realities of climate change, the history and devastation of the chestnut tree risks being repeated. However, as genetic and ecological research continues on the chestnut tree, evidence shows that a viable replacement tree with characteristics like rapid growth and rot resistance has the potential to serve as an option to forest regrowth.

Climate Change

For Educators

The Gettysburg Nature Alliance's training program allows teachers to embrace and pass along to students research-based instructional practices and technology-based activities, using a chestnut orchard they plant at their own schools.



- Teacher-training sessions are held each year
- Each training session includes several days of instruction
- Teachers will be given free training, materials and equipment.
- Teachers will be given 100 chestnut seeds (provided by The American Chestnut Foundation)
- Teachers will have the opportunity to apply for a mini grant to help with writing lessons and implementing lessons at individual schools.
- Students will apply knowledge and research skills through planting and cultivating a chestnut grove

Partners

- The American Chestnut Foundation
- Gettysburg Heritage Center
- Chesapeake Bay Foundation
- Hood College
- Adams Electric Cooperative
- Pennsylvania State Game Commission
- White Birch Paper
- Gettysburg Municipal Authority
- Appalachian Brewing Company--Battlefield
- ACNB Bank
- Vernier Computer Interface
- Stroud Water Research Center
- Adams County Soil Conservation District



Partner Statement

The Center for Coastal and Watershed Studies is a center of excellence within Hood College from which we study all aspects of coastal environments and the watersheds that culminate at our shorelines.

In keeping with the best of Hood's liberal arts tradition, our aim is to provide a framework for multi-disciplinary learning and research by students and faculty with the goal of understanding the genesis, complexities, and possible solutions to environmental and social issues that impact the coastlines and watersheds of our region, nation, and world.

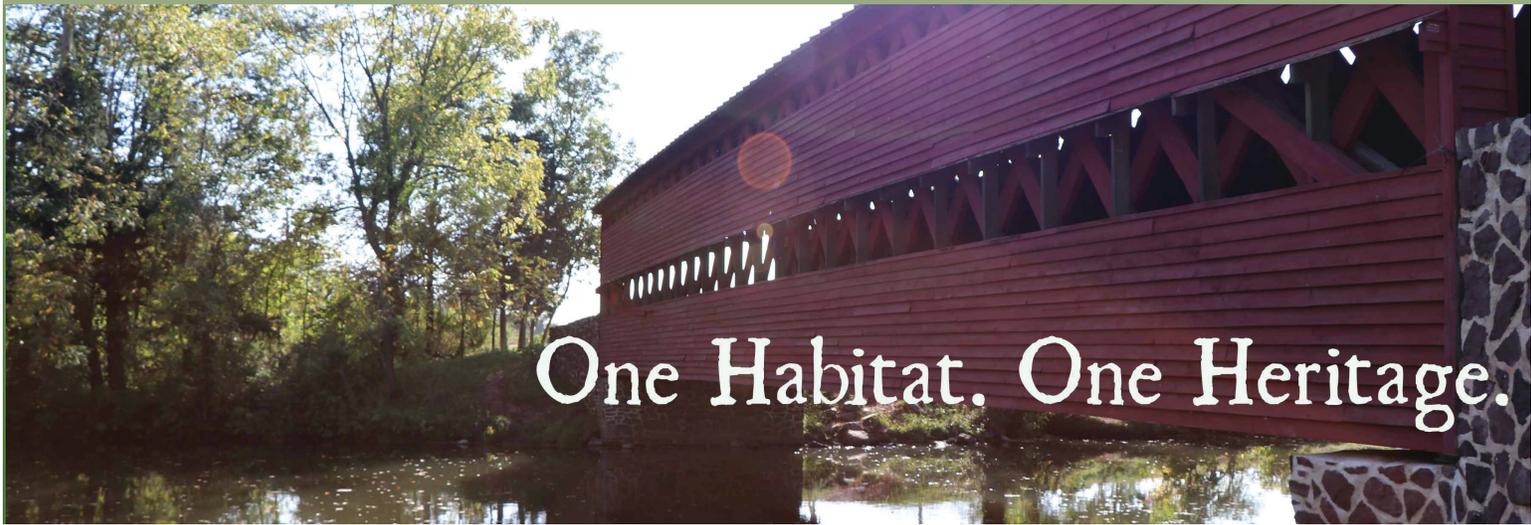
In partnership with the Gettysburg Nature Alliance, the Center provides scientific expertise and training opportunities for pre-service and in-service teachers that result in scientifically relevant lab and field experiences for students enrolled in STEM disciplines.



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